

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2005/000569

International filing date (day/month/year)
02.03.2005

Priority date (day/month/year)
17.03.2004

International Patent Classification (IPC) or both national classification and IPC
C07F9/09

Applicant
CLARIANT INTERNATIONAL LTD

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

11.1.2006

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/IB2005/000569

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2005/000569

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-4,6-9
	No: Claims	1,5
Inventive step (IS)	Yes: Claims	6,9
	No: Claims	2-4,7,8
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/IB2005/000569

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: DATABASE CHEMABS [Online] CHEMICAL ABSTRACTS SERVICE,
COLUMBUS, OHIO, US; 1994, WACHI, TOSHIO ET AL: "Preparation of
phosphate triesters" XP002289140 retrieved from STN Database accession no.
1994:54693

D2: CARIES RESEARCH , 25(1), 51-7 CODEN: CAREBK; ISSN: 0008-6568, 1991,
XP009034124

D3: WO 02/08164 A (BASF AG ; MAAS HEIKO (DE); TROPSCH JUERGEN (DE))
31 January 2002 (2002-01-31)

D4: WO 03/091192 A (BASF AG ; RULAND ALFRED (DE); BOEHN ROLAND (DE);
HACKMANN CLAUS (DE);) 6 November 2003 (2003-11-06)

D5: DE 203 03 420 U1 (SASOL GERMANY GMBH) 30 October 2003 (2003-10-30)

2. D1, see RN 151834-99-0, Field "CN" und fig., already discloses a compound
according to formula I, in which the variables have the following meanings:

$m = 3$

$n = 2 \text{ oder } 3$

$x = 5$

$s = 1$

$r = 3$

$r + s = 4$

Claim 1, therefore, lacks novelty over D1.

D2 , page 52, left hand column "Alkyl Phosphates" describes the phosphoric acid

monoester of tetraethylenglykol-mono-(2-ethylhexyl)etherr und das disodiumsalt (E) thereof and at page 53 tables 1 and 2 tooth protection agents against streptokokkus consisting of (E) and distilled water or (E), dist. water and non-ionic surfaceactive agent.

The free acid of (E) meets the variables of claim 1:

$$m = 1$$

$$n = 2$$

$$x = 4$$

$$s = 1$$

$$r = 3$$

$$r + s = 4$$

Hence, claims 1 und 5 lack novelty over D2.

D3-D5 are no anticipations. D3 discloses alcohol residues which are different from formula II; D4 is concerned with guerbet oligoalkoxylate but does not disclose phosphate esters thereof. D5 only discloses a broader generic definition of phosphateesters of guerbet oligoalkoxilates. In contrast thereto the novel compounds of formula I according to claim 1 are novel as being a selection.

3. Compounds known from D1 and D2 can be prepared and used in analogy to known processes from (see the search report for the specific disclosures). Hence, claims 3,4,8 are obvious over the combination D1/D3 or D2/D3. Furthermore, preparation and use of still new compounds is obvious over the combination of D5 (page 11, lines 20-26) or D4 (example 1) with D3 (example 7, claims 12 and 19). Hence, in addition to the novelty objection claims 1-5, 7 and 8 also obvious.